

WHAT IS CLAIMED IS:

1. In a communication system using a packet network for distributing packets between endpoints desiring to participate in talkgroup calls, the endpoints  
5 including a plurality of consoles distributed among one or more console sites, a method comprising:

receiving a call request for a talkgroup call;

identifying a number of priority consoles requesting participation in the talkgroup call;

10 identifying, based on a location of the priority consoles, a number of priority console sites for the talkgroup call;

determining, for one or more console site links of the packet network serving the priority console sites, an availability of bandwidth; and

15 granting the call request if sufficient bandwidth is available for each of the one or more console site links.

2. The method of claim 1, wherein the step of identifying a number of priority consoles comprises:

20 receiving, by a call controller from one or more consoles, a message requesting priority participation in the talkgroup call; and

designating the one or more consoles as priority consoles.

3. The method of claim 1, wherein the step of identifying a number of priority consoles comprises:

25 receiving, by a call controller from a management device, information identifying one or more consoles as priority consoles; and

based on the information, designating the one or more consoles as priority consoles.

30 4. The method of claim 1, wherein the step of identifying a number of priority console sites comprises:

determining a location of one or more priority consoles at one or more console sites; and

designating the one or more console sites as priority console sites.

5           5. The method of claim 1, wherein the step of determining an availability of bandwidth comprises determining a number of call units of bandwidth supportable by the one or more console site links.

6. The method of claim 1, further comprising:  
10           busing the call request, yielding a busied call request if, at a time of the request, sufficient bandwidth is not available for each of the one or more console site links; and

                  granting the busied call request at a later time if, at the later time, sufficient bandwidth becomes available for each of the one or more console site  
15           links.

7. The method of claim 1, comprising:  
                  granting the call request even if sufficient bandwidth is not available on a console site link of the one or more console site links, by pre-empting one or more  
20           active calls as needed to sufficiently increase the available bandwidth on the console site link.

8. The method of claim 7, wherein the step of pre-empting one or more active calls comprises pre-empting a number of active calls designated as non-  
25           priority calls on the console site link.

9. The method of claim 8, comprising:  
                  receiving, by a call controller from one or more consoles, a message requesting non-priority participation in the talkgroup call; and  
30           designating the one or more consoles as non-priority consoles.

10. The method of claim 8, comprising:  
determining a volume threshold for priority calls;  
designating a call as a non-priority call if it is being monitored at a volume  
5 less than the volume threshold.

11. The method of claim 8, comprising:  
designating a call as a non-priority call if the call is in hang-time.

10 12. In a communication system using a packet network for distributing  
packets between endpoints desiring to participate in talkgroup calls, the endpoints  
including a plurality of consoles distributed among one or more console sites, the  
console sites being connected to the packet network by console site links, a  
method comprising:

15 receiving a call request for a talkgroup call;  
identifying a number of priority consoles requesting participation in the  
talkgroup call;  
identifying as priority console sites, any console sites including one or  
more priority consoles for the talkgroup call;  
20 identifying as non-priority console sites, any console sites not including  
one or more priority consoles for the talkgroup call;  
determining, for a number of priority console site links associated with the  
priority console sites, an availability of bandwidth; and  
granting the call request, yielding an active talkgroup call, if sufficient  
25 bandwidth is available for each of the priority console site links.

13. The method of claim 12, wherein the step of determining an  
availability of bandwidth comprises determining numbers of call units of  
bandwidth supportable by the priority console site links.

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14. The method of claim 12, comprising:

granting the call request even if sufficient bandwidth is not available on a  
priority console site link of the number of priority console site links, by pre-  
empting one or more active non-priority calls supported by the priority console  
5 site link to sufficiently increase the available bandwidth on the priority console  
site link.

15. The method of claim 12, wherein the step of granting the call request  
comprises sending payload associated with the talkgroup call to the priority  
10 console sites, if sufficient call units of bandwidth are available for the priority  
console site links.

16. The method of claim 12, further comprising:

determining, for a number of non-priority console site links associated  
15 with the non-priority console sites, an availability of bandwidth; and  
granting one or more non-priority console sites into the call, if sufficient  
bandwidth is available on the non-priority console site links.

17. The method of claim 16, wherein the step of determining an  
20 availability of bandwidth comprises determining numbers of call units of  
bandwidth supportable by the non-priority console site links.

18. The method of claim 17 wherein the step of granting one or more non-  
priority console sites into the call comprises:  
25 sending payload associated with the talkgroup call to the one or more non-  
priority console sites, if sufficient call units of bandwidth are available for the one  
or more priority console site links.

19. The method of claim 18, comprising:

not sending payload associated with the talkgroup call to a non-priority console site, if sufficient call units of bandwidth are not available to the non-priority console site; and

5 notifying a console at the non-priority console site, that it is not receiving payload associated with the talkgroup call.

20. The method of claim 19 comprising:

receiving, from the console at the non-priority console site, a message indicating a desire to change its priority status for the talkgroup call;

10 in response to the message, designating the console as a priority console and changing the non-priority console site to a priority console site for the talkgroup call;

pre-empting one or more non-priority calls as needed to sufficiently increase the available bandwidth on the console site link associated with the  
15 priority console; and

sending payload associated with the talkgroup call to the priority console, if sufficient call units of bandwidth are available for its associated console site link.

20 21. The method of claim 19 comprising:

activating, by the console at the non-priority console site, a PTT switch indicating a desire to source payload for the talkgroup call;

changing a priority status of the console to a priority console for the duration of the call.

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